

[illegible]

	JJJ	000000000	888888888888	CCCCCCCCCCCC	TTTTTTTTTTTTTTTT	LLL		
	JJJ	000000000	888888888888	CCCCCCCCCCCC	TTTTTTTTTTTTTTTT	LLL		
	JJJ	000000000	888888888888	CCCCCCCCCCCC	TTTTTTTTTTTTTTTT	LLL		
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888	888	CCC	TTT	LLL
	JJJ	000	000	888888888888		CCC	TTT	LLL
	JJJ	000	000	888888888888		CCC	TTT	LLL
	JJJ	000	000	888888888888		CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJ	JJJ	000	000	888	888	CCC	TTT	LLL
JJJJJJJJJ		000000000	888888888888	CCCCCCCCCCCC		TTT	LLLLLLLLLLLLLLLL	
JJJJJJJJJ		000000000	888888888888	CCCCCCCCCCCC		TTT	LLLLLLLLLLLLLLLL	
JJJJJJJJJ		000000000	888888888888	CCCCCCCCCCCC		TTT	LLLLLLLLLLLLLLLL	

MA

```

JJ      000000  BBBB8888  CCCCCCCC  TTTT888888  LL      DDDDDDDD  EEEEEEEEEEE  FFFFFFFFFFF
JJ      000000  BBBB8888  CCCCCCCC  TTTT888888  LL      DDDDDDDD  EEEEEEEEEEE  FFFFFFFFFFF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BBB88888  CC      TT      LL      DD      DD  EEEEEEEEE  FFFFFFFF
JJ      00      00  BBB88888  CC      TT      LL      DD      DD  EEEEEEEEE  FFFFFFFF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJ      00      00  BB      BB  CC      TT      LL      DD      DD  EE      FF
JJJJJJ  000000  BBBB8888  CCCCCCCC  TT      LL      DDDDDDDD  EEEEEEEEEEE  FF
JJJJJJ  000000  BBBB8888  CCCCCCCC  TT      LL      DDDDDDDD  EEEEEEEEEEE  FF

```

```

RRRRRRRR  EEEEEEEEEEE  QQQQQQ
RRRRRRRR  EEEEEEEEEEE  QQQQQQ
RR      RR  EE      QQ      QQ
RR      RR  EE      QQ      QQ
RR      RR  EE      QQ      QQ
RR      RR  EE      QQ      QQ
RRRRRRRR  EEEEEEEEEEE  QQ      QQ
RRRRRRRR  EEEEEEEEEEE  QQ      QQ
RR      RR  EE      QQ      QQ
RR      RR  EE      QQ      QQ
RR      RR  EE      QQ      QQ
RR      RR  EE      QQ      QQ
RR      RR  EEEEEEEEEEE  QQQQ  QQ
RR      RR  EEEEEEEEEEE  QQQQ  QQ

```

## JOBCTLDEF.REQ - Job Controller Common Definitions

Version: 'V04-001'

\*\*\*\*\*  
\* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY \*  
\* DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS. \*  
\* ALL RIGHTS RESERVED. \*  
\*\*\*\*\*

\* THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED \*  
\* ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE \*  
\* INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER \*  
\* COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY \*  
\* OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY \*  
\* TRANSFERRED. \*  
\*\*\*\*\*

\* THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE \*  
\* AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT \*  
\* CORPORATION. \*  
\*\*\*\*\*

\* DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS \*  
\* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL. \*  
\*\*\*\*\*

++  
FACILITY:  
Job controller.

ABSTRACT:  
This file contains the common definitions for the job controller.

ENVIRONMENT:  
VAX/VMS user mode.

--  
AUTHOR: M. Jack, CREATION DATE: 21-Feb-1983

## MODIFIED BY:

V04-001	JAK0233	J A Krycka	10-Sep-1984
	Define FLAGS_V_INVALID_SJH.		
V03-020	JAK0230	J A Krycka	28-Aug-1984
	Add additonal FLAGS options for debugging purposes.		
V03-019	JAK0228	J A Krycka	20-AUG-1984
	Define JBC\$K_MAXPARSIZ and JBC\$K_MAXPARSIZ_ALL.		
V03-018	JAK0224	J A Krycka	10-Aug-1984
	Define FLAGS_V_NO_REMOTE_DOORBELL.		



V03-017 JAK0219 J A Krycka 15-Jul-1984  
Update own storage allocation and literal definitions and add  
more diagnostic counters.

V03-016 JAK0218 J A Krycka 12-Jul-1984  
Remove REQUIRE statement referring to JBCMSG as JBC\$ message  
symbols have been moved to STARLET.L32.

V03-015 JAK0214 J A Krycka 25-May-1984  
Add BUG\_CHECK macro.

V03-014 JAK0210 J A Krycka 10-May-1984  
Add FLAGS\_V\_QUEUE\_CREATED and FLAGS\_V\_QUEUE\_SHARED.

V03-013 JAK0207 J A Krycka 07-May-1984  
Increase value of JBC\$K\_QUEUE\_MBF and add diagnostic trace  
vectors and diagnostic counters.

V03-012 JAK0206 J A Krycka 06-May-1984  
Add IMAGE\_DUMP\_STSFLG.

V03-011 JAK0203 J A Krycka 17-Apr-1984  
Update MAX\_SNDJBC\_ITEM value.

V03-010 JAK0202 J A Krycka 16-Apr-1984  
Add/modify queue file creation parameters.

V03-009 MLJ0118 Martin L. Jack, 23-Aug-1983  
Change field names, update for new \$SJCDEF and \$QUIDEF.

V03-008 MLJ0115 Martin L. Jack, 30-Jul-1983  
Changes for job controller baselevel.

V03-007 MLJ0114 Martin L. Jack, 23-Jun-1983  
Changes for job controller baselevel.

V03-006 MLJ0113 Martin L. Jack, 26-May-1983  
Changes for job controller baselevel.

V03-005 MLJ0112 Martin L. Jack, 29-Apr-1983  
Changes for job controller baselevel.

V03-004 MLJ0109 Martin L. Jack, 14-Apr-1983  
Changes for job controller baselevel.

V03-003 MLJ0107 Martin L. Jack, 04-Mar-1983  
Delete JBC\$\_NORMAL (now in JBCMSG again).

V03-002 MLJ0106 Martin L. Jack, 01-Mar-1983  
Delete definition of PID\_W\_PIX.

V03-001 CWH1002 CW Hobbs 01-Mar-1983  
Define SCH\$GL\_PIXWIDTH cell and change the PID\_W\_PIX macro  
to use pixwidth to find the width of the pix in the extended  
process id.

!\*

JOBCTLDEF.REQ;1

16-SEP-1984 16:51:05.59 Page 4

LIBRARY 'SYSS\$LIBRARY:LIB';  
REQUIRE 'LIB\$SYSQUEDEF';

LITERAL  
TRUE= 1;  
FALSE= 0;

STRUCTURE  
BBLOCK[O,P,S,E;N]=  
[N]  
(BBLOCK + 0)<P,S,E>;

PSECT  
CODE= CODE,  
PLIT= CODE,  
OWN= DATA(ADDRESSING\_MODE(LONG\_RELATIVE)),  
GLOBAL= DATA;

SWITCHES  
ADDRESSING\_MODE(  
EXTERNAL=LONG\_RELATIVE,  
NONEXTERNAL=WORD\_RELATIVE);

## MACRO

Macros to determine if the value of an expression is one of a set of specified small-integer values. These macros can be used only if the following conditions are met:

The value to be tested is in the range 0 through 127.

The values to be tested for are all in the range 0 through 31.

Example:

IF ONEOF\_(.X, BMSK\_(1,3,5)) ...

The code generated is much more efficient than a series of comparisons (provided that the parameters of BMSK\_ are all compile-time constant).

```
XBMSK [A]=  
  %IF (A) GTRU 31 %THEN %WARN('ONEOF won't work') %FI  
  (1 ^ (31 - (A))) %,
```

```
BMSK []=  
  %OR XBMSK_(%REMAINING)) %,
```

```
ONEOF (A,B)=  
  ((B) ^ (A)) LSS 0) %;
```



JOBCTLDEF.REQ;1

16-SEP-1984 16:51:05.59 <sup>N 14</sup> Page 6

LINKAGE

L\_OUTPUT\_1=

CALL( ;  
REGISTER=11),

L\_OUTPUT\_2=

CALL( ;  
REGISTER=10, REGISTER=11),

L\_OUTPUT\_3=

CALL( ;  
REGISTER=9, REGISTER=10,  
REGISTER=11),

L\_OUTPUT\_4=

CALL( ;  
REGISTER=8, REGISTER=9,  
REGISTER=10, REGISTER=11);

AC



## LITERAL

JBC\$K_AFTER_IDT=	1,	REQIDT for timed jobs
JBC\$K_HOURLY_IDT=	2,	REQIDT for hourly restricted logins
JBC\$K_MINUTE_IDT=	3,	REQIDT for minute restricted logins
JBC\$K_QUEUE_ALQ=	100,	Allocation/extend quantity for queue file
JBC\$K_QUEUE_GBC=	0,	Global buffer count for queue file
JBC\$K_QUEUE_MBC=	1,	Multiblock count for queue file
JBC\$K_QUEUE_MBF=	50,	Multibuffer count for queue file
JBC\$K_MAXACCREC=	1024,	Largest accounting record
JBC\$K_MAXBUFMSG=	100,	Maximum number of buffered mailbox messages
JBC\$K_MAXFILERR=	2,	Allowed consecutive accounting file errors
JBC\$K_MAXGENTGT=	124,	Maximum generic targets per queue
JBC\$K_MAXPAGES=	5,	Maximum contiguous VM allocation
JBC\$K_MAXPARSIZ=	255,	Maximum size for a single batch parameter string
JBC\$K_MAXPARSIZ_ALL=	480,	Maximum size for all batch parameter strings combined
JBC\$K_MBXBUFSIZ=	1024,	Job controller mailbox buffer size
JBC\$K_SMBMBXSIZ=	1024,	Symbiont mailbox buffer size
JBC\$K_SYNC_EFN=	1;	EFN for all synchronous services

## LITERAL

MIN_GETQUI_FUNC=	QUIS_CANCEL OPERATION,
MAX_GETQUI_FUNC=	QUIS_RESERVED_FUNC_2,
MIN_GETQUI_ITEM=	QUIS_ACCOUNT_NAME,
MAX_GETQUI_ITEM=	QUIS_RESERVED_OUTPUT_6,

MIN_SNDACC_FUNC=	ACCSK_INSMESG,
MAX_SNDACC_FUNC=	ACCSK_DISASEL,

MIN_SNDJBC_FUNC=	SJCS_ABORT JOB,
MAX_SNDJBC_FUNC=	SJCS_RESERVED_FUNC_2,
MIN_SNDJBC_ITEM=	SJCS_ACCOUNTING MESSAGE,
MAX_SNDJBC_ITEM=	SJCS_RESERVED_OUTPUT_2,

MIN_SNDSMB_FUNC=	SMR\$K_INITIAL,
MAX_SNDSMB_FUNC=	SMR\$K_SYNCJOB;

## BIND

JBC\$ CLOSEOUT=	JBC\$ FACILITY^16 + SHRS CLOSEOUT,
JBC\$ NOCMKRNL=	JBC\$ FACILITY^16 + SSS NOCMKRNL,
JBC\$ NOOPER=	JBC\$ FACILITY^16 + SSS NOOPER,
JBC\$ NOSYSNAM=	JBC\$ FACILITY^16 + SSS NOSYSNAM,
JBC\$ OPENIN=	JBC\$ FACILITY^16 + SHRS OPENIN,
JBC\$ OPENOUT=	JBC\$ FACILITY^16 + SHRS OPENOUT,
JBC\$ READERR=	JBC\$ FACILITY^16 + SHRS READERR,
JBC\$ WRITEERR=	JBC\$ FACILITY^16 + SHRS WRITEERR;

## MACRO

ACMST_QUEUE_1=	70,0,0,0 %	! Queue name
ACMSS_QUEUE_1=	16 %	
ACMSW_ENTRY_NUMBER=	86,0,16,0 %	! Job entry number
ACMST_QUE_OPT=	86,0,0,0 %	! Start of options
ACMST_QUEUE_2=	86,0,0,0 %	! Second queue name
ACMSS_QUEUE_2=	16 %	
ACMST_QJB_OPT=	88,0,0,0 %	! Start of options
ACMST_JOBNAME=	88,0,0,0 %	! Job name
ACMST_ENT_OPT=	134,0,0,0 %	! Start of ENTER options
ACMST_ADF_OPT=	118,0,0,0 %	! Start of ADDFIL options
ACMST_INT_FID=	-36,0,0,0 %	! Internal FID item
ACMSW_INT_RSL=	-38,0,16,0 %	! Internal file spec length
ACMSB_RMOD=	37,0,8,0 %	! Requestor's access mode
ACMSL_IMAGECNT=	68,0,32,0 %	! Image counter
ACMSL_EFN=	72,0,32,0 %	! Event flag number
ACMSL_IOSB=	76,0,32,0 %	! IOSB address
ACMSL_ASTADR=	80,0,32,0 %	! AST routine address
ACMSL_ASTPRM=	84,0,32,0 %	! AST routine parameter
ACMSW_FUNC=	88,0,16,0 %	! Function code
ACMST_ITMLST=	90,0,0,0 %	! Start of item list

! Miscellany.

MACRO

MSG_W_TYPE=	0.0.16.0 %	! Mailbox message type
UIC_W_MEM=	0.0.16.0 %	! UIC member number
UIC_W_GRP=	2.0.16.0 %	! UIC group number

! Output from ENQUEUE\_JOB, input to JOB\_STATUS\_MESSAGE.

LITERAL

ENQ_K_CURRENT=	0.	! Job is in current queue
ENQ_K_HOLD=	1.	! Job is in hold queue
ENQ_K_PENDING=	2.	! Job is in pending queue
ENQ_K_TIMER=	3.	! Job is in timer queue
ENQ_K_COMPLETE=	4.	! Job is completing

! General flags.

MACRO

FLAGS_V_QUEUE_LOCKED=	0.0.1.0 %	! Queue file is locked
FLAGS_V_READ_POSTED=	0.1.1.0 %	! Mailbox read outstanding
FLAGS_V_QUEUE_CREATED=	0.2.1.0 %	! Queue file was created
FLAGS_V_QUEUE_SHARED=	0.3.1.0 %	! Queue file can be shared
FLAGS_V_NO_REMOTE_DOORBELL=	0.4.1.0 %	! No remote doorbell lock defined
FLAGS_V_INVALID_SJH=	0.5.1.0 %	! Job record has been released
FLAGS_V_FLAG6=	0.6.1.0 %	! Spare flag 6
FLAGS_V_FLAG7=	0.7.1.0 %	! Spare flag 7
FLAGS_V_FLAG8=	0.8.1.0 %	! Spare flag 8
FLAGS_V_FLAG9=	0.9.1.0 %	! Spare flag 9
FLAGS_V_FLAG10=	0.10.1.0 %	! Spare flag 10
FLAGS_V_FLAG11=	0.11.1.0 %	! Spare flag 11

! Debugging flags.

MACRO

FLAGS_V_READ_VMSD2=	0.16.1.0 %	! Reset debugging control flags from VMSD2 sysgen parameter
FLAGS_V_CLUSTER_SCRAM=	0.17.1.0 %	! On fatal error synchronously bug check entire cluster
FLAGS_V_LEAVE_OPEN=	0.18.1.0 %	! On fatal error leave system job queue file open
FLAGS_V_BUGCHECK=	0.19.1.0 %	! On fatal error bug check system vs abort/restart image
FLAGS_V_CS_QF_DEADLOCK=	0.20.1.0 %	! Bug check cluster on queue file deadlock error
FLAGS_V_LOG_QF_REPAIR=	0.21.1.0 %	! Log on-the-fly repair of queue file
FLAGS_V_OMIT_QF_INIT=	0.22.1.0 %	! Omit queue file initialization after opening it
FLAGS_V_FLAG23=	0.23.1.0 %	! Spare flag 23
FLAGS_V_FLAG24=	0.24.1.0 %	! Spare flag 24
FLAGS_V_FLAG25=	0.25.1.0 %	! Spare flag 25
FLAGS_V_FLAG26=	0.26.1.0 %	! Spare flag 26
FLAGS_V_FLAG27=	0.27.1.0 %	! Spare flag 27

! Diagnostic flags.

! MACRO

DIAG_V_FLAG0=	0,0,1,0 %;	! Diagnostic flag 0
DIAG_V_FLAG1=	0,1,1,0 %;	! Diagnostic flag 1
DIAG_V_FLAG2=	0,2,1,0 %;	! Diagnostic flag 2
DIAG_V_FLAG3=	0,3,1,0 %;	! Diagnostic flag 3

! Fixed/variable data field.

! MACRO

FVDF_LENGTH=	0,0,16,0 %;	! Length of stored data
FVDF_LINK=	2,0,32,0 %;	! Link to auxiliary data record
FVDF_DATA=	2,0,0,0 %;	! Start of in-place stored data

! Event codes for SCAN\_INCOMPLETE\_SERVICES.

! LITERAL

ISRV_K_REMOTE=	0;	! Remote node signalled
ISRV_K_SYNCHRONIZE=	1;	! Job with SYNCHRONIZE completed
ISRV_K_SYMBIONT=	2;	! Symbiont reported completion
ISRV_K_PURGE_SYSID=	3;	! Purge references to SYSID
ISRV_K_PURGE_SMQ=	4;	! Purge references to SMQ
ISRV_K_PURGE_SJH=	5;	! Purge references to SJH

! Flag codes for pause, resume, abort.

! MACRO

ISRV_V_ALIGNMENT_MASK=	0,0,1,0 %;	! Mask alignment data
ISRV_V_TOP_OF_FICE=	0,1,1,0 %;	! Position to top of file

! LITERAL

ISRV_M_ALIGNMENT_MASK=	\$FIELDMASK(ISRV_V_ALIGNMENT_MASK),
ISRV_M_TOP_OF_FICE=	\$FIELDMASK(ISRV_V_TOP_OF_FICE);

! Output item descriptor.

! MACRO

ODSC_W_LENGTH=	0,0,16,0 %;	! Buffer length
ODSC_A_POINTER=	2,0,32,0 %;	! Buffer address
ODSC_A_LENPOINTER=	6,0,32,0 %;	! Return length buffer address

! LITERAL

ODSC_S_ENTRY=	10;	! Size of output item descriptor
---------------	-----	----------------------------------



! Process data block.

MACRO

PDB_LINK=	0,0,32,0 %	! Link to next record
PDB_COUNT=	4,0,32,0 %	! Count of used entries
PDB_ENTRIES=	8,0,0,0 %	! Base of entries
PDE_PID=	0,0,32,0 %	! Process ID
PDE_TYPE=	4,0,32,0 %	! Process type
PDE_P1=	8,0,32,0 %	! Two longwords of arbitrary
PDE_P2=	12,0,32,0 %	! information

LITERAL

PDE_K_ANY=	0.	! Match any type on find
PDE_K_BATCH=	1.	! Batch process
PDE_K_SYMBIONT=	2.	! Symbiont process
PDE_K_OPEN_JOB=	3.	! Open job for process
PDE_S_ENTRY=	16.	! Length of one entry
PDB_K_MAX=	(512 - \$BYTEOFFSET(PDB_ENTRIES)) / PDE_S_ENTRY;	! Number of entries per block

! Interface to SEARCH\_QUEUES routine.

MACRO

QSM_V_OPEN=	0,0,1,0 %	! Job in open queue
QSM_V_TIMER=	0,1,1,0 %	! Job in timer queue
QSM_V_PENDING=	0,2,1,0 %	! Job in pending queue
QSM_V_HOLD=	0,3,1,0 %	! Job in hold queue
QSM_V_CURRENT=	0,4,1,0 %	! Job in current queue

LITERAL

QSM_K_CTXSIZE=	9 * 4.	! Size of context block
QSM_K_NO_REMOVE=	0.	! Never dequeue job
QSM_K_REMOVE=	1.	! Always dequeue job
QSM_K_REMOVE_INACTIVE=	2.	! Dequeue if not executing
QSM_M_OPEN=	\$FIELDMASK(QSM_V_OPEN)	
QSM_M_TIMER=	\$FIELDMASK(QSM_V_TIMER)	
QSM_M_PENDING=	\$FIELDMASK(QSM_V_PENDING)	
QSM_M_HOLD=	\$FIELDMASK(QSM_V_HOLD)	
QSM_M_CURRENT=	\$FIELDMASK(QSM_V_CURRENT)	

! Response message returned to mailbox from \$SNDSMB and \$SNDACC.

MACRO

RSP_W_TYPE=	0,0,16,0 %	! Mailbox message type
RSP_W_ENTRY_NUMBER=	2,0,16,0 %	! Entry number
RSP_L_STATUS=	4,0,32,0 %	! Completion status

LITERAL

RSP_S_MESSAGE=	8;	! Length of message
----------------	----	---------------------

! Short descriptors.

MACRO

SDSC_W_LENGTH=	0,0,16,0 %;	! Length of string
SDSC_A_POINTER=	2,0,32,0 %;	! Address of string

LITERAL

SDSC_K_LENGTH=	6;	! Block length
----------------	----	----------------

## MACRO

```
CLEAR SYSID(S1)=  
  BEGIN  
    (S1) = 0;  
    ((S1)+4)<0,16> = 0;  
  END %;
```

```
COPY SYSID(S1,S2)=  
  BEGIN  
    (S2) = .(S1);  
    ((S2)+4)<0,16> = .((S1)+4)<0,16>;  
  END %;
```

```
SYSID EQL(S1,S2)=  
  BEGIN  
    .(S1) EQL .(S2) AND .((S1)+4)<0,16> EQL .((S2)+4)<0,16>;  
  END %;
```

```
SYSID NEQ(S1,S2)=  
  BEGIN  
    .(S1) NEQ .(S2) OR .((S1)+4)<0,16> NEQ .((S2)+4)<0,16>;  
  END %;
```

```
CLEAR TIME(T1)=  
  BEGIN  
    (T1) = 0;  
    (T1)+4 = 0;  
  END %;
```

```
COPY TIME(T1,T2)=  
  BEGIN  
    (T2) = .(T1);  
    (T2)+4 = .((T1)+4);  
  END %;
```

```
TIME GTRU(T1,T2)=  
  BEGIN  
    .((T1)+4) GTRU .((T2)+4) OR  
    (.((T1)+4) EQL .((T2)+4) AND .(T1) GTRU .(T2));  
  END %;
```

```
TIME GEQU(T1,T2)=  
  BEGIN  
    .((T1)+4) GTRU .((T2)+4) OR  
    (.((T1)+4) EQL .((T2)+4) AND .(T1) GEQU .(T2));  
  END %;
```

## MACRO

```

VALUE_DECL (A)=
    ALIGN(0) A %,
VALUE_DECL_DESC =
    ALIGN(0) BBLOCK[SDSC_K_LENGTH] %;

```

## MACRO

```

BUG_CHECK(CODE)=
    BEGIN
    BUILTIN BUGW;
    EXTERNAL LITERAL %NAME('BUGS_',CODE);
    BUGW (%NAME('BUGS_',CODE) OR-4)
    END %;

```

## PSECT

```
OWN=COMMON(OVERLAY,ADDRESSING_MODE(LONG_RELATIVE));
```

## OWN

DIAG_STORAGE_BASE:	VECTOR[0],	! Start of diagnostic area
DIAG_TRACE:	VECTOR[24],	! Diagnostic trace values
DIAG_COUNT:	VECTOR[24],	! Diagnostic I/O related counters
DIAG_FLAGS:	BBLOCK[4],	! Diagnostic flags
WORK_AREA:	VECTOR[11],	! Scratch work area
SNDJBC_COUNT:	VECTOR[MAX_SNDJBC_FUNC+1],	! Number of \$SNDJBC function code requests
GETQUI_COUNT:	VECTOR[MAX_GETQUI_FUNC+1],	! Number of \$GETQUI function code requests
SNDACC_COUNT:	VECTOR[MAX_SNDACC_FUNC+1],	! Number of \$SNDACC function code requests
SND SMB_COUNT:	VECTOR[MAX_SND SMB_FUNC+1],	! Number of \$SND SMB function code requests
DIAG_STORAGE_END:	VECTOR[0],	! End of diagnostic area
FLAGS:	BBLOCK[4],	! General flags
IMAGE_DUMP_STSFLG,		! Image dump flag for \$CREPRC
THIS_SYSID:	BBLOCK[6],	! System ID of this system
CUR TIME:	VECTOR[2],	! Current time
HOURLY_TIME:	VECTOR[2],	! Time of next hourly timer expiration
HOURLY_PARAMS:	VECTOR[5],	! Parameters for hourly \$CMKRN routine
SYMBIONT COUNT,		! Number to append to symbiont process name
QUEUE REFERENCE COUNT,		! Number of reasons queue file must stay open
MBX_MESSAGE_COUNT,		! Number of buffered mailbox messages
MBX:	REF BBLOCK,	! Pointer to current mailbox message
MBX END:	REF BBLOCK,	! Pointer past end of current mailbox message
MEMORY_FREE_QUEUES:	VECTOR[2+JBC\$K_MAXPAGES],	! Queue headers for memory free lists
NONAST_WORK_QUEUE:	VECTOR[2],	! Queue header for non-AST work queue
BCB_FREE_LIST,		! List of free buffer control blocks
BCB_ACTIVE_LIST,		! List of active buffer control blocks
GQL_FREE_LIST,		! List of free \$GETQUI lock blocks
GQL_ACTIVE_LIST,		! List of active \$GETQUI lock blocks
OPEN_GETQUI_LIST,		! List of open \$GETQUI operation blocks
PROCESS DATA LIST,		! List of process data blocks
SYMBIONT CONTROL,		! List of symbiont control blocks
SPARE AREA:	VECTOR[3],	! Spare work area
REMOTE_REQUEST_LKSB:	VECTOR[4,WORD],	! Lock status block for remote request lock
QUEUE_FILE_LKSB:	VECTOR[4,WORD],	! Lock status block for queue master lock



```

QUEUE_LOCK_LKSB:      VECTOR[4,WORD],      ! Lock status block for queue synchronization lock
RSP:                  BBLOCK[RSP_S_MESSAGE], ! Service response ($SNDACC/$SND$SMB format)
JBC_PRIORITY:         BBLOCK[8],            ! Job controller's base priority
JBC_PRIVILEGES:       BBLOCK[8],            ! Job controller's privileges
JBC_QUOTAS:           BBLOCK[66],           ! Job controller's quotas
JBC_UIC:              BBLOCK[66],           ! Job controller's UIC

QUEUE_FAB:            $FAB_DECL,            ! FAB for queue file
QUEUE_RAB:            $RAB_DECL,            ! RAB for queue file
QUEUE_NAM:            $NAM_DECL,            ! NAM block for queue file
QUEUE_XAB:            $XABPRO_DECL,         ! Protection XAB for queue file
QUEUE_RSA:            VECTOR[NAM$C_MAXRSS,BYTE], ! Resultant string for queue file
QUEUE_ALQ:            BBLOCK[4],           ! Queue file allocation and extend quantity
QUEUE_MBF:            BBLOCK[1],           ! Queue file multibuffer count

ACCOUNTING_FABS:      VECTOR[2],            ! Pointers to current, inactive accounting FABs
ACCOUNTING_RABS:      VECTOR[2],            ! Pointers to current, inactive accounting RABs
ACCOUNT_FAB_A:        $FAB_DECL,            ! FAB for accounting file (primary)
ACCOUNT_RAB_A:        $RAB_DECL,            ! RAB for accounting file (primary)
ACCOUNT_NAM_A:        $NAM_DECL,            ! NAM block for accounting file (primary)
ACCOUNT_RSA_A:        VECTOR[NAM$C_MAXRSS,BYTE], ! Resultant string for accounting file (primary)
ACCOUNT_FAB_B:        $FAB_DECL,            ! FAB for accounting file (alternate)
ACCOUNT_RAB_B:        $RAB_DECL,            ! RAB for accounting file (alternate)
ACCOUNT_NAM_B:        $NAM_DECL,            ! NAM block for accounting file (alternate)
ACCOUNT_RSA_B:        VECTOR[NAM$C_MAXRSS,BYTE], ! Resultant string for accounting file (alternate)

DIAG_FAB:             $FAB_DECL,            ! FAB for diagnostic file
DIAG_RAB:             $RAB_DECL,            ! RAB for diagnostic file

MBX_CHAN,             ! Channel assigned to job controller mailbox
MBX_IOSB:             VECTOR[4,WORD],       ! I/O status block for mailbox read
MBX_BUFFER:           BBLOCK[JBC$K_MBXBUFSIZ], ! Mailbox read buffer -- MUST follow MBX_IOSB!!!

VALUE_STORAGE_BASE:   VALUE_DECL_(VECTOR[0]),
ITEM_PRESENT:         VALUE_DECL_(BITVECTOR[256]),
VALUE_GETQUI_BASE:    VALUE_DECL_(VECTOR[0]),
VALUE_ACCOUNTING_MESSAGE: VALUE_DECL_DESC,
VALUE_ACCOUNTING_TYPES: VALUE_DECL_(BBLOCK[4]),
VALUE_AFTER_TIME:     VALUE_DECL_(VECTOR[2]),
VALUE_ALIGNMENT_PAGES: VALUE_DECL_(BYTE),
VALUE_BASE_PRIORITY:  VALUE_DECL_(BYTE),
VALUE_BATCH_INPUT:    VALUE_DECL_DESC,
VALUE_BATCH_OUTPUT:   VALUE_DECL_(BBLOCK[ODSC_S_ENTRY]),
VALUE_BUFFER_COUNT:   VALUE_DECL_(BYTE),
VALUE_CHARACTERISTIC_NAME: VALUE_DECL_DESC,
VALUE_CHARACTERISTIC_NUMBER: VALUE_DECL_(BYTE),
VALUE_CHARACTERISTICS: VALUE_DECL_(BITVECTOR[128]),
VALUE_CHECKPOINT_DATA: VALUE_DECL_DESC,
VALUE_CLI:            VALUE_DECL_DESC,
VALUE_CPU_DEFAULT:    VALUE_DECL_(LONG),
VALUE_CPU_LIMIT:      VALUE_DECL_(LONG),
VALUE_DESTINATION_QUEUE: VALUE_DECL_(VECTOR[2]),
VALUE_DEVICE_NAME:    VALUE_DECL_DESC,
VALUE_ENTRY_NUMBER:   VALUE_DECL_(LONG),
VALUE_ENTRY_NUMBER_OUTPUT: VALUE_DECL_(BBLOCK[ODSC_S_ENTRY]),
VALUE_EXTEND_QUANTITY: VALUE_DECL_(WORD),

```

VALUE_FILE_COPIES:	VALUE_DECL_(BYTE),
VALUE_FILE_IDENTIFICATION:	VALUE_DECL_(BBLOCK[36]),
VALUE_FILE_SETUP_MODULES:	VALUE_DECL_DESC,
VALUE_FILE_SPECIFICATION:	VALUE_DECL_DESC,
VALUE_FIRST_PAGE:	VALUE_DECL_(LONG),
VALUE_FORM_DESCRIPTION:	VALUE_DECL_DESC,
VALUE_FORM_LENGTH:	VALUE_DECL_(BYTE),
VALUE_FORM_MARGIN_BOTTOM:	VALUE_DECL_(BYTE),
VALUE_FORM_MARGIN_LEFT:	VALUE_DECL_(WORD),
VALUE_FORM_MARGIN_RIGHT:	VALUE_DECL_(WORD),
VALUE_FORM_MARGIN_TOP:	VALUE_DECL_(BYTE),
VALUE_FORM_NAME:	VALUE_DECL_DESC,
VALUE_FORM_NUMBER:	VALUE_DECL_(LONG),
VALUE_FORM:	VALUE_DECL_(VECTOR[2]),
VALUE_FORM_SETUP_MODULES:	VALUE_DECL_DESC,
VALUE_FORM_STOCK:	VALUE_DECL_DESC,
VALUE_FORM_WIDTH:	VALUE_DECL_(WORD),
VALUE_GENERIC_TARGET:	VALUE_DECL_(VECTOR[1+2*JBC\$K_MAXGENTGT]),
VALUE_JOB_COPIES:	VALUE_DECL_(BYTE),
VALUE_JOB_LIMIT:	VALUE_DECL_(BYTE),
VALUE_JOB_NAME:	VALUE_DECL_DESC,
VALUE_JOB_RESET_MODULES:	VALUE_DECL_DESC,
VALUE_JOB_SIZE_MAXIMUM:	VALUE_DECL_(LONG),
VALUE_JOB_SIZE_MINIMUM:	VALUE_DECL_(LONG),
VALUE_JOB_STATUS_OUTPUT:	VALUE_DECL_(BBLOCK[ODSC_S_ENTRY]),
VALUE_LAST_PAGE:	VALUE_DECL_(LONG),
VALUE_LIBRARY_SPECIFICATION:	VALUE_DECL_DESC,
VALUE_LOG_QUEUE:	VALUE_DECL_(VECTOR[2]),
VALUE_LOG_SPECIFICATION:	VALUE_DECL_DESC,
VALUE_NOTE:	VALUE_DECL_DESC,
VALUE_OPERATOR_REQUEST:	VALUE_DECL_DESC,
VALUE_OWNER_UID:	VALUE_DECL_(LONG),
VALUE_PAGE_SETUP_MODULES:	VALUE_DECL_DESC,
VALUE_PARAMETER_1:	VALUE_DECL_DESC,
VALUE_PARAMETER_2:	VALUE_DECL_DESC,
VALUE_PARAMETER_3:	VALUE_DECL_DESC,
VALUE_PARAMETER_4:	VALUE_DECL_DESC,
VALUE_PARAMETER_5:	VALUE_DECL_DESC,
VALUE_PARAMETER_6:	VALUE_DECL_DESC,
VALUE_PARAMETER_7:	VALUE_DECL_DESC,
VALUE_PARAMETER_8:	VALUE_DECL_DESC,
VALUE_PRIORITY:	VALUE_DECL_(BYTE),
VALUE_PROCESSOR:	VALUE_DECL_DESC,
VALUE_PROTECTION:	VALUE_DECL_(LONG),
VALUE_QUEUE:	VALUE_DECL_DESC,
VALUE_QUEUE_FILE_SPECIFICATION:	VALUE_DECL_DESC,
VALUE_RELATIVE_PAGE:	VALUE_DECL_(LONG),
VALUE_RESERVED_INPUT_1:	VALUE_DECL_(BYTE),
VALUE_RESERVED_INPUT_2:	VALUE_DECL_(WORD),
VALUE_RESERVED_INPUT_3:	VALUE_DECL_(LONG),
VALUE_RESERVED_INPUT_4:	VALUE_DECL_DESC,
VALUE_RESERVED_OUTPUT_1:	VALUE_DECL_(BBLOCK[ODSC_S_ENTRY]),
VALUE_RESERVED_OUTPUT_2:	VALUE_DECL_(BBLOCK[ODSC_S_ENTRY]),
VALUE_SEARCH_STRING:	VALUE_DECL_DESC,
VALUE_SC\$NODE_NAME:	VALUE_DECL_(BBLOCK[6]),
VALUE_WSDEFAULT:	VALUE_DECL_(WORD),

JOBCTLDEF.REQ;1

16-SEP-1984 16:51:05.59 Page 17

VALUE\_WSEXTENT:  
VALUE\_WSQUOTA:  
VALUE\_STORAGE\_END:

VALUE\_DECL\_(WORD),  
VALUE\_DECL\_(WORD),  
VALUE\_DECL\_(VECTOR[0]);

PSECT

OWN=DATA;



0190 AH-BT13A-SE  
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION  
CONFIDENTIAL AND PROPRIETARY

